

**STATE OF MISSISSIPPI  
AIR POLLUTION CONTROL  
TITLE V PERMIT**

**TO OPERATE AIR EMISSIONS EQUIPMENT**

**THIS CERTIFIES THAT**

Northeast Mississippi Solid Waste Management Authority,  
NE Mississippi Regional Landfill  
2941 County Road 302  
Tippah County  
Walnut, Mississippi

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with Title V of the Federal Clean Air Act (42 U.S.C.A. § 7401 - 7671) and the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

**Permit Issued:**     MAR 17 2015    

**Effective Date:** As specified herein.

**MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD**

  
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**AUTHORIZED SIGNATURE**

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Expires:** February 28, 2020

**Permit No.:** 2620-00055

## **TABLE OF CONTENTS**

SECTION 1. GENERAL CONDITIONS.....	3
SECTION 2. EMISSION POINTS & POLLUTION CONTROL DEVICES .....	13
SECTION 3. EMISSION LIMITATIONS & STANDARDS .....	13
SECTION 4. COMPLIANCE SCHEDULE .....	19
SECTION 5. MONITORING, RECORDKEEPING & REPORTING REQUIREMENTS.....	19
SECTION 6. ALTERNATIVE OPERATING SCENARIOS .....	24
SECTION 7. TITLE VI REQUIREMENTS .....	36

**APPENDIX A LIST OF ABBREVIATIONS USED IN THIS PERMIT**

**APPENDIX B 40 CFR 82 - PROTECTION OF STRATOSPHERIC OZONE**

**APPENDIX C 40 CFR 60, SUBPART WWW – STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS**

**APPENDIX D 40 CFR 63, SUBPART AAAA – NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS: MUNICIPAL SOLID WASTE LANDFILLS**

**APPENDIX E 40 CFR 61, SUBPART M – NATIONAL EMISSIONS STANDARDS FOR ASBESTOS**

**APPENDIX F 40 CFR 60, SUBPART A – GENERAL PROVISIONS**

## SECTION 1. GENERAL CONDITIONS

- 1.1 The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Federal Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(6)(a).)
- 1.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(6)(b).)
- 1.3 This permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(6)(c).)
- 1.4 This permit does not convey any property rights of any sort, or any exclusive privilege. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(6)(d).)
- 1.5 The permittee shall furnish to the DEQ within a reasonable time any information the DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permittee or, for information to be confidential, the permittee shall furnish such records to DEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(6)(e).)
- 1.6 The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is challenged or held invalid, the validity of the remaining permit provisions and/or portions thereof or their application to other persons or sets of circumstances, shall not be affected thereby. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(5).)
- 1.7 The permittee shall pay to the DEQ an annual permit fee. The amount of fee shall be determined each year based on the provisions of regulated pollutants for fee purposes and the fee schedule specified in the Commission on Environmental Quality's order which shall be issued in accordance with the procedure outlined in Regulation 11 Miss. Admin. Code Pt. 2, Ch. 6.)
  - (a) For purposes of fee assessment and collection, the permittee shall elect for actual or allowable emissions to be used in determining the annual quantity of emissions unless the Commission determines by order that the method chosen by the applicant for

calculating actual emissions fails to reasonably represent actual emissions. Actual emissions shall be calculated using emission monitoring data or direct emissions measurements for the pollutant(s); mass balance calculations such as the amounts of the pollutant(s) entering and leaving process equipment and where mass balance calculations can be supported by direct measurement of process parameters, such direct measurement data shall be supplied; published emission factors such as those relating release quantities to throughput or equipment type (e.g., air emission factors); or other approaches such as engineering calculations (e.g., estimating volatilization using published mathematical formulas) or best engineering judgments where such judgments are derived from process and/or emission data which supports the estimates of maximum actual emission. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.6.A(2).)

- (b) If the Commission determines that there is not sufficient information available on a facility's emissions, the determination of the fee shall be based upon the permitted allowable emissions until such time as an adequate determination of actual emissions is made. Such determination may be made anytime within one year of the submittal of actual emissions data by the permittee. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.6.A(2).) If at any time within the year the Commission determines that the information submitted by the permittee on actual emissions is insufficient or incorrect, the permittee will be notified of the deficiencies and the adjusted fee schedule. Past due fees from the adjusted fee schedule will be paid on the next scheduled quarterly payment time. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.6.D(2).)
- (c) The fee shall be due September 1 of each year. By July 1 of each year the permittee shall submit an inventory of emissions for the previous year on which the fee is to be assessed. The permittee may elect a quarterly payment method of four (4) equal payments; notification of the election of quarterly payments must be made to the DEQ by the first payment date of September 1. The permittee shall be liable for penalty as prescribed by State Law for failure to pay the fee or quarterly portion thereof by the date due. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.6.D.)
- (d) If in disagreement with the calculation or applicability of the Title V permit fee, the permittee may petition the Commission in writing for a hearing in accordance with State Law. Any disputed portion of the fee for which a hearing has been requested will not incur any penalty or interest from and after the receipt by the Commission of the hearing petition. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.6.C.)

1.8 No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(8).)

- 1.9 Any document required by this permit to be submitted to the DEQ shall contain a certification by a responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.2.E.)
- 1.10 The permittee shall allow the DEQ, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- (a) enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - (b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - (c) inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - (d) as authorized by the Federal Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.C(2).)
- 1.11 Except as otherwise specified or limited herein, the permittee shall have necessary sampling ports and ease of accessibility for any new air pollution control equipment, obtained after May 8, 1970, and vented to the atmosphere. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.I(1).)
- 1.12 Except as otherwise specified or limited herein, the permittee shall provide the necessary sampling ports and ease of accessibility when deemed necessary by the Permit Board for air pollution control equipment that was in existence prior to May 8, 1970. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.I(2).)
- 1.13 Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance where such applicable requirements are included and are specifically identified in the permit or where the permit contains a determination, or summary thereof, by the Permit Board that requirements specifically identified previously are not applicable to the source. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.F(1).)
- 1.14 Nothing in this permit shall alter or affect the following:
- (a) the provisions of Section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section;

- (b) the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - (c) the applicable requirements of the acid rain program, consistent with Section 408(a) of the Federal Act.
  - (d) the ability of EPA to obtain information from a source pursuant to Section 114 of the Federal Act. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.F(2).)
- 1.15 The permittee shall comply with the requirement to register a Risk Management Plan if permittee's facility is required pursuant to Section 112(r) of the Act to register such a plan. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.H.)
- 1.16 Expiration of this permit terminates the permittee's right to operate unless a timely and complete renewal application has been submitted. A timely application is one which is submitted at least six (6) months prior to expiration of the Title V permit. If the permittee submits a timely and complete application, the failure to have a Title V permit is not a violation of regulations until the Permit Board takes final action on the permit application. This protection shall cease to apply if, subsequent to the completeness determination, the permittee fails to submit by the deadline specified in writing by the DEQ any additional information identified as being needed to process the application. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.4.C(2)., R. 6.4.B., and R. 6.2.A(1)(c).)
- 1.17 The permittee is authorized to make changes within their facility without requiring a permit revision (ref: Section 502(b)(10) of the Act) if:
- (a) the changes are not modifications under any provision of Title I of the Act;
  - (b) the changes do not exceed the emissions allowable under this permit;
  - (c) the permittee provides the Administrator and the Department with written notification in advance of the proposed changes (at least seven (7) days, or such other time frame as provided in other regulations for emergencies) and the notification includes:
    - (1) a brief description of the change(s),
    - (2) the date on which the change will occur,
    - (3) any change in emissions, and
    - (4) any permit term or condition that is no longer applicable as a result of the change;

- (d) the permit shield shall not apply to any Section 502(b)(10) change. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.4.F(1).)
- 1.18 Should the Executive Director of the Mississippi Department of Environmental Quality declare an Air Pollution Emergency Episode, the permittee will be required to operate in accordance with the permittee's previously approved Emissions Reduction Schedule or, in the absence of an approved schedule, with the appropriate requirements specified in 11 Miss. Admin. Code Pt. 2, Ch. 3., "Regulations for the Prevention of Air Pollution Emergency Episodes" for the level of emergency declared. (Ref.: 11 Miss. Admin. Code Pt. 2, Ch. 3.)
- 1.19 Except as otherwise provided herein, a modification of the facility may require a Permit to Construct in accordance with the provisions of Regulations 11 Miss. Admin. Code Pt. 2, Ch. 2., "Permit Regulations for the Construction and/or Operation of Air Emissions Equipment", and may require modification of this permit in accordance with Regulations 11 Miss. Admin. Code Pt. 2, Ch. 6., "Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act". Modification is defined as "[a]ny physical change in or change in the method of operation of a facility which increases the actual emissions or the potential uncontrolled emissions of any air pollutant subject to regulation under the Federal Act emitted into the atmosphere by that facility or which results in the emission of any air pollutant subject to regulation under the Federal Act into the atmosphere not previously emitted. A physical change or change in the method of operation shall not include:
- (a) routine maintenance, repair, and replacement;
  - (b) use of an alternative fuel or raw material by reason of an order under Sections 2 (a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
  - (c) use of an alternative fuel by reason of an order or rule under Section 125 of the Federal Act;
  - (d) use of an alternative fuel or raw material by a stationary source which:
    - (1) the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166; or
    - (2) the source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166;

- (e) an increase in the hours of operation or in the production rate unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Subpart I or 40 CFR 51.166; or
  - (f) any change in ownership of the stationary source."
- 1.20 Any change in ownership or operational control must be approved by the Permit Board. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.4.D(4).)
- 1.21 This permit is a Federally approved operating permit under Title V of the Federal Clean Air Act as amended in 1990. All terms and conditions, including any designed to limit the source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act as well as the Commission. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.B(1).)
- 1.22 Except as otherwise specified or limited herein, the open burning of residential, commercial, institutional, or industrial solid waste, is prohibited. This prohibition does not apply to infrequent burning of agricultural wastes in the field, silvicultural wastes for forest management purposes, land-clearing debris, debris from emergency clean-up operations, and ordnance. Open burning of land-clearing debris must not use starter or auxiliary fuels which cause excessive smoke (rubber tires, plastics, etc.); must not be performed if prohibited by local ordinances; must not cause a traffic hazard; must not take place where there is a High Fire Danger Alert declared by the Mississippi Forestry Commission or Emergency Air Pollution Episode Alert imposed by the Executive Director and must meet the following buffer zones.
- (a) Open burning without a forced-draft air system must not occur within 500 yards of an occupied dwelling.
  - (b) Open burning utilizing a forced-draft air system on all fires to improve the combustion rate and reduce smoke may be done within 500 yards of but not within 50 yards of an occupied dwelling.
  - (c) Burning must not occur within 500 yards of commercial airport property, private air fields, or marked off-runway aircraft approach corridors unless written approval to conduct burning is secured from the proper airport authority, owner or operator. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.G.)
- 1.23 Except as otherwise specified herein, the permittee shall be subject to the following provision with respect to emergencies.
- (a) Except as otherwise specified herein, an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission



limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- (b) An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in (c) following are met.
- (c) The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs, or other relevant evidence that include information as follows:
  - (1) an emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - (2) the permitted facility was at the time being properly operated;
  - (3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - (4) the permittee submitted notice of the emergency to the DEQ within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- (d) In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (e) This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.G.)

1.24 Except as otherwise specified herein, the permittee shall be subject to the following provisions with respect to upsets, startups, shutdowns and maintenance.

- (a) Upsets (as defined by 11 Miss. Admin. Code Pt. 2, R. 1.2.KK.)
  - (1) The occurrence of an upset constitutes an affirmative defense to an enforcement action brought for noncompliance with emission standards or other requirements of Applicable Rules and Regulations or any applicable permit if the permittee

demonstrates through properly signed contemporaneous operating logs, or other relevant evidence that include information as follows:

- (i) an upset occurred and that the permittee can identify the cause(s) of the upset;
  - (ii) the source was at the time being properly operated;
  - (iii) during the upset the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements of Applicable Rules and Regulations or any applicable permit;
  - (iv) the permittee submitted notice of the upset to the DEQ within 5 working days of the time the upset began; and
  - (v) the notice of the upset shall contain a description of the upset, any steps taken to mitigate emissions, and corrective actions taken.
- (2) In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- (3) This provision is in addition to any upset provision contained in any applicable requirement.
- (b) Startups and Shutdowns (as defined by 11 Miss. Admin. Code Pt. 2, R. 1.2.HH. & R. 1.2.CC.)
- (1) Startups and shutdowns are part of normal source operation. Emissions limitations applicable to normal operation apply during startups and shutdowns except as follows:
    - (i) when sudden, unavoidable breakdowns occur during a startup or shutdown, the event may be classified as an upset subject to the requirements above;
    - (ii) when a startup or shutdown is infrequent, the duration of excess emissions is brief in each event, and the design of the source is such that the period of excess emissions cannot be avoided without causing damage to equipment or persons; or
    - (iii) when the emissions standards applicable during a startup or shutdown are defined by other requirements of Applicable Rules and Regulations or any applicable permit.

- (2) In any enforcement proceeding, the permittee seeking to establish the applicability of any exception during a startup or shutdown has the burden of proof.
  - (3) In the event this startup and shutdown provision conflicts with another applicable requirement, the more stringent requirement shall apply.
- (c) Maintenance.
- (1) Maintenance should be performed during planned shutdown or repair of process equipment such that excess emissions are avoided. Unavoidable maintenance that results in brief periods of excess emissions and that is necessary to prevent or minimize emergency conditions or equipment malfunctions constitutes an affirmative defense to an enforcement action brought for noncompliance with emission standards, or other regulatory requirements if the permittee can demonstrate the following:
    - (i) the permittee can identify the need for the maintenance;
    - (ii) the source was at the time being properly operated;
    - (iii) during the maintenance the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements of Applicable Rules and Regulations or any applicable permit;
    - (iv) the permittee submitted notice of the maintenance to the DEQ within 5 working days of the time the maintenance began or such other times as allowed by DEQ; and
    - (v) the notice shall contain a description of the maintenance, any steps taken to mitigate emissions, and corrective actions taken.
  - (2) In any enforcement proceeding, the permittee seeking to establish the applicability of this section has the burden of proof.
  - (3) In the event this maintenance provision conflicts with another applicable requirement, the more stringent requirement shall apply. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.10.)

1.25 The permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M, as adopted by

reference in Regulation 11 Miss Admin. Code Pt. 2, R. 1.8. The permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities

**SECTION 2. EMISSION POINTS & POLLUTION CONTROL DEVICES**

Emission Point	Description
AA-001	Municipal Solid Waste Landfill with a gas collection and control system and a design capacity of 11,240,000 cubic yards
AA-002	Fugitive emissions from roads, construction and landfill operations

**SECTION 3. EMISSION LIMITATIONS & STANDARDS**

**A. Facility-Wide Emission Limitations & Standards**

3.A.1 Except as otherwise specified or limited herein, the permittee shall not cause, permit, or allow the emission of smoke from a point source into the open air from any manufacturing, industrial, commercial or waste disposal process which exceeds forty (40) percent opacity subject to the exceptions provided in (a) & (b).

- (a) Startup operations may produce emissions which exceed 40% opacity for up to fifteen (15) minutes per startup in any one hour and not to exceed three (3) startups per stack in any twenty-four (24) hour period.
- (b) Emissions resulting from soot blowing operations shall be permitted provided such emissions do not exceed 60 percent opacity, and provided further that the aggregate duration of such emissions during any twenty-four (24) hour period does not exceed ten (10) minutes per billion BTU gross heating value of fuel in any one hour. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.A.)

3.A.2 Except as otherwise specified or limited herein, the permittee shall not cause, allow, or permit the discharge into the ambient air from any point source or emissions, any air contaminant of such opacity as to obscure an observer's view to a degree in excess of 40% opacity, equivalent to that provided in Paragraph 3.A.1. This shall not apply to vision obscuration caused by uncombined water droplets. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.B.)

**B. Emission Point Specific Emission Limitations & Standards**

3. B.1 For Emission Point AA-001, the permittee shall either comply with §60.752(b) (2) or calculate a NMOC emission rate for the landfill using the procedures specified in §60.754(b) for areas of the landfill affected by a new or existing gas collection and control system and §60.754(a) for all other landfill areas. The NMOC emission rate shall be recalculated annually, except as provided in §60.757(b) (1) (ii). When the landfill is

closed and either never needed control or meets the conditions for control system removal specified in §60.752(b) (v), a Title V operating permit shall no longer be required.

- (a) If the calculated NMOC emission rate is less than 50 megagrams per year, the permittee shall:
  - (1) Submit an annual emission report to the DEQ, except as provided for in §60.757(b) (1) (ii); and
  - (2) Recalculate the NMOC emission rate annually using the procedures specified in §60.754(a)(1) for landfill areas not affected by a new or existing gas collection and control system and §60.754(b) for affected landfill areas until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.
    - (a) If the NMOC emission rate, upon recalculation required in §60.752(b) (1) (ii), is equal to or greater than 50 megagrams per year, the permittee shall comply with Section 3.B.1.b of this permit or elect to recalculate the NMOC emission rate following the procedures defined in §60.754(a)(c), (4) and (5) for landfill areas not affected by a new or existing gas collection and control system demonstrating the NMOC emission rate is less than 50 megagrams per year.
    - (b) If the landfill is permanently closed, a closure notification shall be submitted to the DEQ as provided in §60.757(d).
- (b) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the permittee shall:
  - (1) Submit a demonstration that the new or existing collection and control system design plan prepared by a professional engineer to the DEQ within 1 year which complies with the following:
    - (a) The collection and control system as described in the plan shall meet the design requirements of §60.752(b) (2) (ii).
    - (b) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §60.753 through §60.758 proposed by the permittee. Any approved alternatives in the control system design plan may be used, when applicable, under the terms of this permit.
    - (c) The collection and control system design plan shall either conform with specifications for active collection systems in §60.759 or include

a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to §60.759.

- (d) The design plan shall indicate that the active collection system:
    - (1) Was designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
    - (2) Collects gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:
      - (i) 5 years or more, if active; or,
      - (ii) 2 years or more if closed or at final grade;
    - (3) Collects gas at a sufficient extraction rate;
    - (4) Was designed to minimize off-site migration of subsurface gas.
  
  - (e) The DEQ shall review the information submitted under §60.752(b) (2) (i) (A), (B) and (C) and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.
- (2) If any existing collection system does not comply with the design requirements of 40 CFR 60.752(b)(2), the permittee will expand/modify the collection system within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year as specified in §60.757(c)(1) or (2).
  - (3) After installation of a collection and control system for Emission Point AA-001, the permittee shall route all collected gas to the control system. The control system must comply with either paragraph (a), (b), (c) or (d) of this section.
    - (a) An open flare designed and operated in compliance with §60.18;

- (b) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test, required under §60.8 using the test methods specified in §60.754(d).
  - (1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.
  - (2) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §60.756;
- (c) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraphs (a) or (b) of this section.
- (d) Comply with the requirements outlined in Section 6, Alternate Operating Scenarios, of this permit.
- (4) For Emission Point AA-001, the permittee, upon being required to install a collection system in accordance with NSPS Subpart WWW, shall operate the collection and control device installed to comply with Subpart WWW in accordance with §60.753, §60.755 and §60.756.
- (5) For Emission Point AA-001, the permittee may cap or remove the collection and control system provided that all the conditions of paragraphs (a), (b), and (c) of this section are met:
  - (a) The landfill shall be no longer accepting solid waste and be permanently closed under the requirements of 40 CFR 258.60. A closure report shall be submitted to the Administrator as provided in §60.757(d);
  - (b) The collection and control system shall have been in operation a minimum of 15 years; and
  - (c) Following the procedures specified in §60.754(b) of Subpart WWW, the calculated NMOC gas produced by the landfill shall be less than 50



megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart. (Ref.: 40 CFR 60.752(b))

- 3. B.2 For Emission Point AA-001, the permittee shall not cause or permit the emission of any gas stream which contains hydrogen sulfide in excess of one grain per 100 standard cubic feet. Gas streams containing hydrogen sulfide in excess of one grain per 100 standard cubic feet shall be incinerated at temperatures of not less than 1600°F for a period of not less than 0.5 seconds, or processed in such manner which is equivalent to or more effective for the removal of hydrogen sulfide. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4B(2))
- 3. B.3 For Emission Point AA-001, the permittee shall comply with §61.154 for asbestos-containing waste material received from a source covered under §61.149, 61.150, or §61.155. The full text of the referenced regulations is contained in Appendix D to this permit. (Ref.: 40 CFR 61.154)
- 3. B.4 Emission Point AA-001 is affected by and shall comply with the National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills at such time as the uncontrolled NMOC emissions exceed 50 MG/yr as determined by methods and procedure specified under 40 CFR 60.754 and the facility is required to install a gas collection and control system for compliance with 40 CR 60 Subpart WWW. (Ref. 40 CFR Part 63, Subpart AAAA)
- 3. B.5 For Emission Point AA-001, the permittee shall not cause or permit the emission of gas containing sulfur oxides (measured as sulfur dioxide) in excess of 500 ppm by volume from the collection and control system when installed. (11 Miss. Admin. Code Pt. 2, R. 1.4.B(1))
- 3.B.6 Emission Point AA-001 is affected by and shall comply with the applicable Standards of Performance for Municipal Solid Waste Landfills. (Ref. 40 CFR 60, Subpart WWW – Included as Appendix C of this permit).

**C. Insignificant and Trivial Activity Emission Limitations & Standards**

Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limit/Standard
11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.C.1	PM	0.6 lbs/MMBTU
11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).	3.C.2	SO <sub>2</sub>	4.8 lbs/MMBTU
11.Miss. Admin. Code Pt. 2,R. 1.4.B(2)	3.C.3	H <sub>2</sub> S	1 grain/100 standard cubic foot

3.C.1 The maximum permissible emission of ash and/or particulate matter from fossil fuel

burning installations of less than 10 million BTU per hour heat input shall not exceed 0.6 pounds per million BTU per hour heat input. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).)

- 3.C.2 The maximum discharge of sulfur oxides from any fuel burning installation in which the fuel is burned primarily to produce heat or power by indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per million BTU heat input. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).)
  
- 3.C.3 The maximum permitted emission of any gas stream which contains hydrogen sulfide shall not exceed one grain per 100 standard cubic feet. Gas streams containing hydrogen sulfide in excess of one grain per 100 standard cubic feet shall be incinerated at temperatures of not less than 1600 °F for a period of not less than 0.56 seconds, or processed in such a manner which is equivalent to or more effective for the removal of hydrogen sulfide.

#### SECTION 4. COMPLIANCE SCHEDULE

- 4.1 Unless otherwise specified herein, the permittee shall be in compliance with all requirements contained herein upon issuance of this permit.
  
- 4.2 Except as otherwise specified herein, the permittee shall submit to the Permit Board and to the Administrator of EPA Region IV a certification of compliance with permit terms and conditions, including emission limitations, standards, or work practices, by January 31 for the preceding calendar year. Each compliance certification shall include the following:
  - (a) the identification of each term or condition of the permit that is the basis of the certification;
  
  - (b) the compliance status;
  
  - (c) whether compliance was continuous or intermittent;

- (d) the method(s) used for determining the compliance status of the source, currently and over the applicable reporting period;
- (e) such other facts as may be specified as pertinent in specific conditions elsewhere in this permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.C(5)(a), (c), & (d).)

4.3 The permittee shall comply with all applicable requirements and limitations and any subsequent future revisions to the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart AAAAA, as specified in Conditions 3.B.4, and 5.C.5 by the date the landfill is required to install the gas collection and control system as specified in 40 CFR 60.752(b) (2) of Subpart WWW., (Ref. 40 CFR 63, Subpart AAAAA, §63.1945(d)).

## SECTION 5. MONITORING, RECORDKEEPING & REPORTING REQUIREMENTS

### A. General Monitoring, Recordkeeping and Reporting Requirements

- 5.A.1 The permittee shall install, maintain, and operate equipment and/or institute procedures as necessary to perform the monitoring and recordkeeping specified below.
- 5.A.2 In addition to the recordkeeping specified below, the permittee shall include with all records of required monitoring information the following:
  - (a) the date, place as defined in the permit, and time of sampling or measurements;
  - (b) the date(s) analyses were performed;
  - (c) the company or entity that performed the analyses;
  - (d) the analytical techniques or methods used;
  - (e) the results of such analyses; and
  - (f) the operating conditions existing at the time of sampling or measurement. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(b)(1).)
- 5.A.3 Except where a longer duration is specified in an applicable requirement, the permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(b)(2).)

- 5.A.4 Except as otherwise specified herein, the permittee shall submit reports of any required monitoring by July 31 and January 31 for the preceding six-month period. All instances of deviations from permit requirements must be clearly identified in such reports and all required reports must be certified by a responsible official consistent with 11 Miss. Admin. Code Pt. 2, R. 6.2.E. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(c)(1).)
- 5.A.5 Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. Said report shall be made within five (5) days of the time the deviation began. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(c)(2).)
- 5.A.6 Except as otherwise specified herein, the permittee shall perform emissions sampling and analysis in accordance with EPA Test Methods and with any continuous emission monitoring requirements, if applicable. All test methods shall be those versions or their equivalents approved by the DEQ and the EPA.
- 5.A.7 The permittee shall maintain records of any alterations, additions, or changes in equipment or operation.

**B. Specific Monitoring and Recordkeeping Requirements**

- 5. B.1 For Emission Point AA-001, except as provided in §60.752(b) (2) (i) (B), upon exceedance of the 50 MG/yr NMOC threshold as determined in accordance with §60.754(a) and/or §60.754(b) and the date that the gas system must be installed to comply with 40 CFR 60, Subpart WWW, the permittee shall comply with the monitoring requirements of §60.756. (Ref.: 40 CFR 60.756)
- 5.B.2 For Emission Point AA-001, except as provided in §60.752(b)(2)(i)(B), the permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. (Ref.: 40 CFR 60.758(a))
- 5. B.3 For Emission Point AA-001, except as provided in §60.752(b) (2) (i) (B), upon exceedance of the 50 MG/yr NMOC threshold as determined in accordance with §60.754(a) and/or §60.754(b) and the date that the gas system must be installed to comply with 40 CFR 60, Subpart WWW, the permittee shall comply with the recordkeeping requirements of §60.758(b), (c), (d) and (e). (Ref.: 40 CFR 60.758(b), (c), (d) and (e))

**C. Specific Reporting Requirements**

- 5.C.1 For Emission Point AA-001, except as provided in §60.752(b)(2)(i)(B), the permittee shall submit a NMOC emission rate report to the DEQ annually, except as provided for in §60.757(b)(1)(ii), §60.757(b)(3) or Section 5.C.1.c of this permit. The DEQ may request such additional information as may be necessary to verify the reported NMOC emission rate.

- (a) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in §60.754(a) or (b), as applicable.
  - (1) NMOC emission rate reports shall be submitted annually, except as provided for §60.757(b) (1) (ii) and (b) (3).
  - (2) If the estimated NMOC emission rate as reported in the annual report to the DEQ is less than 50 megagrams per year in each of the next five (5) consecutive years, the permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which a NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the DEQ. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the DEQ. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.
- (b) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.
- (c) The permittee shall become exempt from the requirements of §60.757(b) (1) and (2), after the installation/expansion of a collection and control system in compliance with §60.752(b) (2), during such time as the collection and control system is in operation and in compliance with §60.753 and §60.755.  
(Ref.: 40 CFR 60.757(b))

5.C.2 For Emission Point AA-001, when the permittee is subject to §60.752(b)(2)(i) and 3.B.1, the permittee shall submit a collection and control system design plan to DEQ within 1 year of the first report, required under §60.757(b), in which the emission rate exceeds 50 megagrams per year, except as follows:

- (a) If the permittee elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in §60.754(a) (3) and/or §60.754(b) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

- (b) If the permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in §60.754(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of §60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to DEQ within 1 year of the first calculated emission rate exceeding 50 megagrams per year.  
(Ref.: 40 CFR 60.757(c))
5. C.3 For Emission Point AA-001, upon exceedance of 50 MG/yr of NMOCs as determined in accordance with §60.754(a) and/or §60.754(b) and the date that the gas system must be installed to comply with 40 CFR 60, Subpart WWW and except as provided in §60.752(b)(2)(i)(B), the permittee shall comply with the reporting requirements in §60.757(d), (e), (f) and (g). (Ref.: 40 CFR 60.757(d), (e), (f) and (g))
5. C.4 For Emission Point AA-001, the permittee shall comply with §61.153 for asbestos-containing waste material received from a source covered under §§61.149, 61.150, or 61.155. The full text of the referenced regulations is contained in Appendix D to this permit. (Ref.: 40 CFR 61.153)
5. C.5 For Emission Point AA-001, when required the permittee must also keep records and reports as specified in the general provisions of 40 CFR Part 60 and 40 CFR Part 63 as shown in Table 1 of the Subpart AAAA. Applicable records in the general provisions include items such as SSM Plans and SSM semi-annual reports. (Ref. 40 CFR 63, Subpart AAAA, §63.1980(b))

## SECTION 6. ALTERNATIVE OPERATING SCENARIOS

### A. Operating Scenario Description

- 6.A.1 For Emission Point, AA-001, the permittee installed a gas collection and control system prior to a design and installation date established by the New Source Performance Standards (NSPS) Subpart WWW. (Ref.: Federally Enforceable Requirement established in the Title V Permit issued **October 13, 2009**)
- 6.A.2 For Emission Point, AA-001, the gas collection and control system installed is not subject to the monitoring, reporting and recordkeeping requirements established by NSPS Subpart WWW. (Ref.: Federally Enforceable Requirement established in the Title V Permit issued **October 13, 2009**)
- 6.A.3 For Emission Point, AA-001, the gas collection and control system is subject and shall comply with the monitoring, reporting and recordkeeping requirements established by this permit. (Ref.: Federally Enforceable Requirement established in the Title V Permit issued **October 13, 2009**)
- 6.A.4 Flares used to comply with the provisions of 40 CFR 60.18, Subpart A, shall be operated at all times when emission may be vented to them. (Ref.: Federally Enforceable Requirement established in the Title V Permit issued **October 13, 2009**)

### B. Operating Conditions

- 6.B.1 Flares shall be designed for and operated with no visible emissions as determined by the methods specified in Condition 6.D.1 of this permit, except for a period not to exceed a total of 5 minutes during any two consecutive hours. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))
- 6.B.2 Flares shall be operated with a flame present at all times, as determined by the methods specified in Condition 6.D.2 of this permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))
- 6.B.3 For flare operation, the permittee shall comply with either (a) and (b) for heat content specifications and maximum tip velocity specifications, respectively or (c) and (d):
- (a) Heat Content Specifications: Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7/45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in Condition 6.D.3.a of this permit.
  - (b) Maximum Tip Velocity Specifications:

- (1) Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in Condition 6.D.4 of this permit, less than 18.3 m/sec (60 ft/sec) except as provided in Conditions 6.B.3.b.2 and 6.B.3.b.3 of this permit.
  - (2) Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in Condition 6.D.4 of this permit, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
  - (3) Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in Condition 6.D.4 of this permit, less than the velocity,  $V_{max}$ , as determined by the method specified in Condition 6.D.5 of this permit and less than 122 m/sec (400 ft/sec) are allowed.
- (c) Flares shall be used that have a diameter of 3 inches or greater, are non-assisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity,  $V_{max}$ , as determined by the following equation:
- (1)  $V_{max} = (X_{H2} - K_1) * K_2$ , where:  
  
 $V_{max}$  = Maximum permitted velocity, m/sec;  
 $K_1$  = Constant, 6.0 volume-percent hydrogen;  
 $K_2$  = Constant, 3.9 (m/sec) volume-percent hydrogen  
 $X_{H2}$  = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77.
- (d) The actual exit velocity of a flare shall be determined by the method specified in Condition 6.D.4 of this permit.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))
- 6.B.4 Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in Condition 6.D.6 of this permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))
- 6.B.5 Flares used to comply with this permit shall be steam-assisted, air-assisted or non-assisted. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))



6.B.6 The permittee shall operate the gas collection system with negative pressure at each wellhead except under the following conditions:

- (a) A fire or increased well temperature. The permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be maintained in the facility operating record for a period of five (5) years.
- (b) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows.
- (c) Prior to the requirement to install/expand the GCCS for compliance with NSPS, any instances when the operational requirements mentioned in 6.B.7 below cannot be achieved through typical wellhead tuning.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.B.7 The permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. Prior to the requirement to install/expand the GCCS for compliance with NSPS, any instances when these operational requirements cannot be achieved, the permittee may simply shut the extraction well off. In the event that the permittee decides to establish a higher operating value, a higher operating value may be established for temperature, nitrogen, or oxygen at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

- (a) The nitrogen level shall be determined using Method 3C described in 40 CFR 60, Appendix A.
- (b) The oxygen shall be determined by on oxygen meter using Method 3A or 3 C described in 40 CFR 60, Appendix A except that:
  - (1) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span.
  - (2) A data recorder is not required.
  - (3) Only two (2) calibration gases are required, a zero and span, and ambient air may be used as the span.
  - (4) A calibration error check is not required.
  - (5) The allowable sample bias, zero drift and calibration drift are  $\pm 10$  percent.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.B.8 When required by 40 CFR 60, Subpart WWW, the permittee shall operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.

The permittee may establish an alternate traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

- 6.B.9 When required by 40 CFR 60, Subpart WWW, the permittee shall operate the collection system such that all collected gases are vented to a control/treatment system designed and operated in compliance with 40 CFR 60.752(b)(2)(iii). In the event the collection system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour of the collection system becoming inoperable. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))
- 6.B.10 The permittee shall operate the control/ treatment system at all times when the collected gas is routed to the system. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))
- 6.B.11 When required by 40 CFR 60, Subpart WWW, the permittee shall implement corrective actions as described in 40 CFR 60.755(a)(3) through (5) or 40 CFR 60.755(c) of NSPS Subpart WWW in the event the required monitoring demonstrates that the operation requirements described in Conditions 6.B.6, 6.B.7, and 6.B.8 of this permit are not met. If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements of this section of the permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

C. Monitoring, Reporting & Recordkeeping

- 6.C.1 Owners or operators of flares used to comply with 40 CFR 60.18 Subpart A shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))
- 6.C.2 When required by 40 CFR 60, Subpart WWW, the following procedures shall be used for compliance with the surface methane operational standard as provided in Condition 6.B.8 of this permit:
  - (a) After installation of the collection system, the permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in Condition 6.C.3 of this permit.
  - (b) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
  - (c) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of 40 CFR 60, Appendix A, except that the probe inlet shall be placed

within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

- (d) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in parts (1), (2), (3), (4) and (5) of this condition shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of Condition 6.B.8 of this permit.
  - (1) The location of each monitored exceedance shall be marked and the location recorded.
  - (2) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.
  - (3) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in Condition 6.C.2(d)(5) of this permit shall be taken, and no further monitoring of that location is required until the action specified in Condition 6.C.2(d)(5) of this permit has been taken.
  - (4) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in Condition 6.C.2(d)(2) or (3) of this permit shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further re-monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in Conditions 6.C.2(d)(3) and (5) shall be taken.
  - (5) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Department for approval.
- (e) The permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.C.3 When required by 40 CFR 60, Subpart WWW, the permittee shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

- (a) The portable analyzer shall meet the instrument specifications provided in Section 3 of Method 21 of 40 CFR 60, Appendix A, except that “methane” shall replace all references to VOC.
- (b) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
- (c) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of 40 CFR 60, Appendix A, the instrument evaluation procedures of section 4.4 of Method 21 of 40 CFR 60, Appendix A shall be used.
- (d) The calibration procedures provided in section 4.2 of Method 21 of 40 CFR 60, Appendix A shall be followed immediately before commencing a surface monitoring survey.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.C.4 When required by 40 CFR 60, Subpart WWW, the provisions of this condition apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shut-down or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.C.5 When required by 40 CFR 60, Subpart WWW, the permittee shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

- (a) Measure the gauge pressure in the gas collection header on a monthly basis. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except as allowed in Condition 6.B.6 of this permit.
- (b) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis. If an exceedance of the limits established in Condition 6.B.7 of this permit is determined within any monitored well, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the permittee shall develop a modification of the collection system to address the exceedance and submit same to the Department for review within 60 days of the first measurement. Any attempted corrective action shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Department for approval.
- (c) Monitor temperature of the landfill gas on a monthly basis as provided in Condition 6.B.7 of this permit.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.C.6 For the open flare, the permittee shall install, calibrate, maintain, and operate according to the manufacturer’s specifications the following equipment:

- (a) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

- (b) When a bypass is present on the flare, a device that records flow to or bypass of the flare. The permittee shall either:
  - (1) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
  - (2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.C.7 When required by 40 CFR 60, Subpart WWW, the permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed herein. Records shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

- (a) The maximum expected gas generation flow rate.
- (b) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices.
- (c) All visible emission readings, heat content determination, flow rate or bypass flow rate measurements and exit velocity determinations made during the performance test as specified in Condition 6.B.3 of this permit,; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flare flame is absent.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.8 When a bypass is present on the flare, the permittee shall maintain up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.9 When required by 40 CFR 60, Subpart WWW, the permittee shall maintain up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified by this permit and up-to-date readily accessible records of all periods of operations in which the flame or flare pilot flame is absent. This shall be considered an exceedance and shall be reported per Condition 6.C.11 of this permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.10 When required by 40 CFR 60, Subpart WWW, the permittee shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.11 When required by 40 CFR 60, Subpart WWW, the permittee shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and

planned collector in the system and providing a unique identification location label for each collector. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.12 When required by 40 CFR 60, Subpart WWW, the permittee shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.13 When required by 40 CFR 60, Subpart WWW, the permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or non-degradable wastes excluded from collection as well as any non-productive areas excluded from the collection system. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.14 When required by 40 CFR 60, Subpart WWW, the permittee shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards herein, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b))

6.C.15 When required by 40 CFR 60, Subpart WWW and/or 40 CFR 63, Subpart AAAA, the permittee shall submit to the Department semi-annual reports of the recorded information described in this paragraph:

- (a) Value and length of time for exceedance of applicable parameters monitored under this permit.
- (b) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified by this permit.
- (c) Description of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.
- (d) All periods when the collection system was not operating in excess of 5 days.
- (e) The location of each exceedance of the 500 parts per million methane concentration as required by this permit and the concentration recorded at each location for which an exceedance was recorded in the previous month.
- (f) The date of installation and the location of each well or collection system expansion added pursuant to Conditions 6.C.5 and 6.C.2.d of this permit.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(c))

6.C.16 When required by 40 CFR 60, Subpart WWW and/or 40 CFR 63, Subpart AAAA, the permittee shall submit the report required in Condition 6.C.15 of this permit on or before January 31<sup>st</sup> and July 31<sup>st</sup> of each year for the preceding six month period. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(c))

D. Analytical Methodology

6.D.1 Method 22 of 40 CFR Subpart A, Appendix A shall be used to determine the compliance of flares with the visible emission provisions of Condition 6.B.1 of this permit. The observation period is 2 hours and shall be used according to Method 22. The compliance determination

required by this condition shall be completed annually and the results shall be maintained in the facility operating record for a period of five (5) years. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A.(3)(b)(3))

6.D.2 For Condition 6.B.2 of this permit, the presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a)(2))

6.D.3 For Condition 6.B.3.a of this permit, the net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$(a) \quad H_T = K * \sum_{i=1}^n (C_i * H_i)$$

Where:

$H_T$  = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg; but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$C_i$  = Concentration of sample component “i” in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in 40 CFR 60.17);

$H_i$  = Net heat of combustion of sample component “i” kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 and D4809-95 (incorporated by reference as specified in 40 CFR 60.17), if published values are not available or cannot be calculated.

$$K = \text{Constant} = 1.740 \times 10^{-7} \left( \frac{1}{\text{ppm}} \right) \left( \frac{\text{g mole}}{\text{scm}} \right) \left( \frac{\text{MJ}}{\text{kcal}} \right)$$

Where the standard temperature for  $\left( \frac{\text{g mole}}{\text{scm}} \right)$  is 20 °C.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a))

6.D.4 For Conditions 6.B.3.b and 6.B.3.d of this permit, the actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D of 40 CFR 60, Subpart A, Appendix A as appropriate; by the unobstructed (free) cross sectional area of the flare tip. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a))

6.D.5 The maximum permitted velocity,  $V_{\max}$ , for flares complying with Condition 6.B.3.b.3 of this permit, shall be determined by the following equation:

$$\text{Log}_{10} (V_{\max}) = (H_T + 28.8)/31.7, \text{ where,}$$

$V_{\max}$  = Maximum permitted velocity, M/sec  
28.8 = Constant  
31.7 = Constant  
 $H_T$  = The net heating value as determined in Condition 6.D.3.a  
(Ref. 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a))

6.D.6 For Condition 6.B.4 of this permit, the maximum permitted velocity,  $V_{\max}$ , for air-assisted flares shall be determined by the following equation:

$V_{\max} = 8.706 + 0.7084(H_T)$ , where,

$V_{\max}$  = Maximum permitted velocity, m/sec  
8.706 = Constant  
0.7084 = Constant  
 $H_T$  = The net heating value as determined in Condition 6.D.3.a.  
(Ref. 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a))

E. Specifications for Active Collection Systems

6.E.1 When required by 40 CFR 60, Subpart WWW, the permittee shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternate procedures are approved by the Department:

- (a) Collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management accessibility, compatibility with filling operations, integration with close end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.
- (b) The sufficient density of gas collection devices determined in Condition 6.E.1(a) of this permit shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.
- (c) The placement of gas collection devices determined in Condition 6.E.1(a) of this permit shall control all gas producing areas, except as follows:
  - (i) Any segregated area of asbestos or non-degradable material may be excluded from collection if those areas are documented in accordance with 40 CFR 60.758(d).
  - (ii) Any nonproductive area of the landfill may be excluded from control.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a))



6.E.2 When required by 40 CFR 60, Subpart WWW, the permittee shall construct the gas collection devices using the following equipment or procedures:

- (a) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.
- (b) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.
- (c) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HPDE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a))

6.E.3 When required by 40 CFR 60, Subpart WWW, the permittee shall convey the landfill gas to a control system in compliance with 3.B.1.b.3 of this permit through collection header pipes. The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 6.3.A(3)(a))

## SECTION 7. TITLE VI REQUIREMENTS

The following are applicable or potentially applicable requirements originating from Title VI of the Clean Air Act – Stratospheric Ozone Protection. The full text of the referenced regulations may be found on-line at <http://ecfr.gpoaccess.gov> under Title 40, or DEQ shall provide a copy upon request from the permittee.

- 7.1 If the permittee produces, transforms, destroys, imports or exports a controlled substance or imports or exports a controlled product, the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart A – Production and Consumption Controls.
- 7.2 If the permittee performs service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart B – Servicing of Motor Vehicle Air Conditioners.
- 7.3 The permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart E – The Labeling of Products Using Ozone-Depleting Substances, for the following containers and products:
  - (a) All containers in which a class I or class II substance is stored or transported;
  - (b) All products containing a class I substance; and
  - (c) All products directly manufactured with a process that uses a class I substance, unless otherwise exempted by this subpart or, unless EPA determines for a particular product that there are no substitute products or manufacturing processes for such product that do not rely on the use of a class I substance, that reduce overall risk to human health and the environment, and that are currently or potentially available. If the EPA makes such a determination for a particular product, then the requirements of this subpart are effective for such product no later than January 1, 2015.
- 7.4 If the permittee performs any of the following activities, the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart F – Recycling and Emissions Reduction:
  - (a) Servicing, maintaining, or repairing appliances;
  - (b) Disposing of appliances, including small appliances and motor vehicle air conditioners;  
or
  - (c) Refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons

selling class I or class II refrigerants or offering class I or class II refrigerants for sale, and persons purchasing class I or class II refrigerants.

- 7.5 The permittee shall be allowed to switch from any ozone-depleting substance to any acceptable alternative that is listed in the Significant New Alternatives Policy (SNAP) program promulgated pursuant to 40 CFR Part 82, Subpart G – Significant New Alternatives Policy Program. The permittee shall also comply with any use conditions for the acceptable alternative substance.
- 7.6 If the permittee performs any of the following activities, the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart H – Halon Emissions Reduction:
- (a) Any person testing, servicing, maintaining, repairing, or disposing of equipment that contains halons or using such equipment during technician training;
  - (b) Any person disposing of halons;
  - (c) Manufacturers of halon blends; or
  - (d) Organizations that employ technicians who service halon-containing equipment.

## APPENDIX A

### List of Abbreviations Used In this Permit

11 Miss. Admin. Code Pt. 2, Ch. 1.	Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants
11 Miss. Admin. Code Pt. 2, Ch. 2.	Permit Regulations for the Construction and/or Operation of Air Emissions Equipment
11 Miss. Admin. Code Pt. 2, Ch. 3.	Regulations for the Prevention of Air Pollution Emergency Episodes
11 Miss. Admin. Code Pt. 2, Ch. 4.	Ambient Air Quality Standards
11 Miss. Admin. Code Pt. 2, Ch. 5.	Regulations for the Prevention of Significant Deterioration of Air Quality
11 Miss. Admin. Code Pt. 2, Ch. 6.	Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act
11 Miss. Admin. Code Pt. 2, Ch. 7.	Acid Rain Program Permit Regulations for Purposes of Title IV of the Federal Clean Air Act
BACT	Best Available Control Technology
CEM	Continuous Emission Monitor
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COM	Continuous Opacity Monitor
COMS	Continuous Opacity Monitoring System
DEQ	Mississippi Department of Environmental Quality
EPA	United States Environmental Protection Agency
gr/dscf	Grains Per Dry Standard Cubic Foot
HP	Horsepower
HAP	Hazardous Air Pollutant
lbs/hr	Pounds per Hour
M or K	Thousand
MACT	Maximum Achievable Control Technology
MM	Million
MMBTUH	Million British Thermal Units per Hour
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards For Hazardous Air Pollutants, 40 CFR 61
	or
	National Emission Standards For Hazardous Air Pollutants for Source Categories, 40 CFR 63
NMVOC	Non-Methane Volatile Organic Compounds
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards, 40 CFR 60
O&M	Operation and Maintenance
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter less than 10 µm in diameter
ppm	Parts per Million
PSD	Prevention of Significant Deterioration, 40 CFR 52
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
TPY	Tons per Year
TRS	Total Reduced Sulfur
VEE	Visible Emissions Evaluation
VHAP	Volatile Hazardous Air Pollutant
VOC	Volatile Organic Compound